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Part I

A COMPENDIOUS

METHOD

For the RAISING of the

Italian BROCOLI, *Spaniſh* CARDOON,
CELERIAC, FINOCHI, and
Other Foreign KITCHEN-VEGETABLES.

As alſo an

ACCOUNT

OF THE

LA LUCERNE, St. FOYNE, CLOVER,
And other *Graſs-Seeds.*

The THIRD EDITION *Revis'd*; *and (from this Summer's Experience) made very perfect and compleat*; *eſpecially that Part which relates to the* BURNING OF CLAY:

IN WHICH IS

A Full ACCOUNT of the firſt Methods of Lighting, Maintaining, Renewing, and Keeping the Fire continually in, by Means of a New-Invented cheap KILN, which does the Burning with great Eaſe and Certainty, and is the chief Art which belongs to this Uſeful and Reaſonable IMPROVEMENT.

By *STEPHEN SWITZER*, Author of the *Practical Fruit* and *Kitchen-Gardener*.

Quare agite, ô, proprios generatim diſcite cultus,
Agricolæ, —— —— VIRG.

LONDON:
Printed for THOMAS ASTLEY, at the *Roſe* in *St. Paul's Churchyard.* 1729. [Price One Shilling.]


BRITISH MUSEUM

Advertiſement to the Second and Third Edition.

THIS Pamphlet having crept its Way into the World by Degrees, it will be neceſſary to give the Reader ſome Account of the Inducements the Author had to publiſh it in this manner. The firſt Occaſion of beginning it, was on account of ſeveral Gentlemen that dealt with him for Huſbandry and Garden-Seeds in *Weſtminſter-Hall*; who would willingly have bought all the Seeds hereafter-mention'd, but that their Gardeners living far in the Country, knew not how to manage them; for which Reaſon he was often oblig'd to write a great many Directions in a Day, which took up more Time and Trouble than all his other Buſineſs; and this, with the Advice and Deſire of ſome of his principal Cuſtomers, was the occaſion of his firſt printing it; but as this could not be done without ſome Expence, the Author thought of ſome other things which might be much more uſeful to add to it, and to make it the Pamphlet which in the firſt Edition it appear'd; and a ſecond Edition being ſoon call'd for, he immediately made ſome *Addenda*'s to it, yet ſo as that the Perſons who had bought the firſt Edition might not be Sufferers by the ſecond, but might have the *Addenda*'s *gratis*.

Thus much as to the ſecond Edition: As to the Publication of this Third, it was in ſome meaſure owing to the good Reception the firſt and ſecond Editions met with in the World, tho' ſomething imperfect, but chiefly to the Improvements made

to

to ſeveral Parts of it from this Summer's Experience, eſpecially that Part of it which relates to the *burning of Clay*; becauſe the Methods which were at firſt receiv'd from *Suſſex* have prov'd ſomething defective this wet Summer; as have alſo before that ſome Receipts that were procured, as 'tis ſaid, from that Noble Lord who was the firſt Inventor of it; for as the chief Difficulty is in getting the Fire well lighted at firſt, and alſo kept in and maintain'd in a regular Manner, whether it has been owing to the Wetneſs of the Seaſon, or to the imperfect Directions which have been received from different Parts, is not certain.

To remedy and perfect this Defect then, here is not only a full Account, but the Draught of a new invented Kiln is added to it; by which means the Fire may not only be lighted well at firſt, but kept in conſtantly with Eaſe and Certainty, and if by the means of wet Weather, or any other Accident, it ſhould go out, it will be very eaſy to renew it again.

A great many other Obſervations are alſo added on *Kitchen-Gardening*, *Huſbandry*, and *Graſs-Seeds*; which will, it is humbly hoped, anſwer the Title-Page, and make this little Treatiſe very compleat and uſeful.

THE

THE PREFACE TO THE First and Second EDITION.

IT is not above a Week or ten Days ſince that, at the Deſire of ſeveral Gentlemen, who do me the Favour to deal with me in Garden-Seeds, I have ſet about drawing up this ſhort Account; the good-natured Reader will not then wonder, that from ſo haſty a Birth this Piece comes out miſhapen, decrepid, and lame, and not able to make its Way into the World; and indeed all that I can ſay in its Behalf is, that moſt of the Particulars herein contained are the real Reſult of Practice and Experience, and the reſt the moſt reaſonable and parallel Deductions I could poſſibly make therefrom.

I have not taken upon me to uſurp the Office of the Cook, in ſetting down all that might be, as to the dreſſing the ſeveral Herbs following in this Account, that not being my Province; but whoever has a good Cook, or reads the Books which

are publiſhed in that Art, will ſoon find, to how many uſeful Purpoſes the following ſhort Collection of Herbs are applied; how much theſe and many other Plants that grow in a Garden contribute to the making a good Dinner; how much, if moderately us'd, to Life and Pleaſure itſelf.

I have in the firſt Place begun with Brocoli, *to be boil'd, a Sallad that has been ſome Time amongſt us; but our not knowing how to manage it, has brought a kind of Diſreputation upon it, though there have been, and are ſtill, many Advocates for it, and, if well manag'd, is in my humble Opinion, next to the true Aſparagus; the beſt boil'd Winter-Sallad we have, at leaſt much better than any other kind of Sprouts that grow, and is in Seaſon at ſuch a Time, when nothing elſe equal to it, can be got.*

The Celeriac *is the next Herb I have endeavoured to promote the Uſe of; thoſe who have eat it abroad ſay, that it is much better that common Celery, inaſmuch, as it grows thicker and ſmaller, and eats much ſhorter, and has a more exalted Taſte than that has. I muſt confeſs I don't know it by that Name, nor do any of the Seedſmen that I have met with at this End of the Town; but a Gentleman in the City, who has long been a great Importer of all curious Seeds, (and of whom I have bought my Seeds) has it from* Alexandria *itſelf by that very Name; and if it be no other than what is commonly known by the Name of the* Italian *Celery, it is my humble Opinion much to be preferr'd before the common Sort.*

The Spaniſh Cardoon *is the next Plant I have recommended to the Cultivation of the Curious, becauſe I think when it is well whiten'd, it eats much better in Soups than Celery does; and being ſtew'd in a Pan, eats a great deal ſhorter, perfectly melting in the Mouth; and beſides all,*

all, may be continued under Glaſſes, or in a Green-Houſe, all the Winter; and is not ſo apt to run to Seed, or grow tough and ſticky in the Spring, as Celery does.

The Finochi, *or* Italian Fennel, *is the next Herb I recommend to be propagated: It has been but a few Years amongſt us, and really but in the Hands of a very few; the Right Honourable the Earl of* Peterborough, *being almoſt the only one that has brought it over, or knows its Virtues and Uſes; but it is a Plant of ſuch wonderful Properties in refining the Blood, exhilerating the Spirits, and ſtrengthening the Stomach, that I am ſanguine enough to believe, that were it poſſible that there were Virtues in any one Plant in Nature capable of introducing Immortality amongſt Mankind, this would do it.*

Something more has been added as to Aliſander, Muſhroom, &c. *but for that I refer my Reader to the Treatiſe itſelf, and before I go any farther, ſhall anſwer an Objection which I find is like to be made againſt this Pamphlet by the Ludicrous and Ill-natur'd, who will perhaps aſk why there is ſuch a Pother about a little* Brocoli, *and a few other Plants well enough known in* England *long before this. But I anſwer, if they are known, it is only but to a few; and the making the Knowledge of it more univerſal amongſt Mankind, as it will I hope contribute more to their Diverſion, Health, &c. than all the wiſe Conundrums of thoſe pretended Wits.*

But that this ſhort Treatiſe may not come into the World unattended with ſomething which is very ſolidly uſeful, I have added in the laſt Part of it the beſt Methods that I know of for raiſing of Graſs-Seeds, which has been of ſo great Uſe and Advantage to theſe Kingdoms, and rais'd the Value of Eſtates more than any one Piece of

Husbandry in use in England, *and have endeavoured to make the Method of raising that valuable Grass the* La Lucerne *more publickly plain.*

The last Thing I have attempted at, is the making the Knowledge and Uses of burning of Clay, which may be justly deem'd the cheapest and most useful Improvement that this or any other Age has found out, and by which Gentlemen, Farmers, and others of all Kinds, may improve their Estates with much more Ease, and cheaper, than they have before; for if Fermentation be, as I think it undoubtedly is, the Axis on which the Scale, or rather the whole Wheel or Circle of Nature turns, both in the Vegetable, as well as Animal System; no wonder that the Coldness of our Soil, the Density of our Air, and, which is more than all, (and indeed the great Calamity of our Climate) the great Rains which fall in the Spring, and which was never more calamitous than it has been this; then, I say, surely those auxiliary Dressings and Improvements, which I have mentioned in the latter Part of this Treatise, must needs be of the greatest Use to all Husbandmen and Farmers.

I own I have wrote a great deal, though I thank God, and the kind Disposition of the present Age, with some kind of Satisfaction and Success; and have only this to add, that supposing this little Pamphlet meets with Approbation, I shall only trouble the World, after my Hydrostaticks *are out, once more; and that shall be (if it please Almighty God to give me Life and Health to finish it) with the shortest, but most useful,* Compendium *that has been as yet published on these Subjects, which will be a Compleat Supplement to this and all other Writings that I have published.*

And

And I return thoſe Gentlemen my hearty Thanks for the Favour they have done me in buying their Seeds of me this Year, aſſuring them (tho' I know of none) that if, through the Shortneſs of the Time that I have had in that Undertaking, and the Haſte and Hurry I am in, in that and other Buſineſs, that if there be any Miſtake made, I will make them amends by ſelling better, if I live till another Year; and that they may depend on thoſe Seeds to which I ſhall then prefix an Aſteriſm, to be the very beſt Seeds of their Kind that are, tho' they pay dearer for them than common Seeds.

All that I have to add, is concerning an Affair of my own, and which will undoubtedly be made uſe of now I appear in ſo publick a Place; and that is, to clear myſelf from a baſe unjuſt Aſperſion caſt upon me by a great Man, ſome few Years ago deceaſed, as if I did not perform my Work, but embezzled ſeveral hundred Pounds of his Money beſides; the Falſity of which is viſible, and ſpeaks for itſelf, in that I never went out of the Way, (though ſome of my Enemies falſly ſaid I did) and that the ſaid great Man has ſince paid all that Money.

The Story is too long to tell in this Place, but the Injuſtice and Injury I have ſuffered by it, is ſuch, that perhaps it is not in the Power (at leaſt I doubt it will not be in the Will) of the Relations that great Perſon has left behind him, to make me Reparation; and as I have ſubmitted patiently to the barbarous Uſage I had from him, during his Life, they muſt excuſe me, if before I take my leave of the World by writing, I do myſelf that Juſtice I dar'd not then to do, though it will bear harder upon his Memory than I am willing it ſhould.

I can't

I can't alſo but in this Place take Notice of ſome very ill Will conceiv'd againſt me by ſome of my Brother Seedſmen, on Account, (as I ſuppoſe, of my being a Gardener, and not a Seedſman bred) that I ſhould ſet up a Seed-Shop in Oppoſition, as they ſay, to them; and that I have in the Introduction to my Seed-Bill, reflected upon them. In the firſt Place I take it, that I have as good a Title to exerciſe that Employ, as any of them have, and can only ſay in Anſwer to them, That 'tis much eaſier for a Gardener to make a Seedſman, than 'tis for a Seedſman to make a Gardener; *and as to the laſt, that I made Reflection on no particular Perſon, but againſt the Errors in general which are to be found in their Liſts, paying all due Reſpect to ſuch of that Trade who have been long in it, and are well vers'd therein. Of this Number is Mr.* Garroway *in* Fleet-Street, *Mr.* Turner *in the* Strand, *and Mr.* Sears *at the* Black-Boy *in* Pall-Mall; *the reſt of that Trade (except it be a noted Importer, or two) I have but little Acquaintance with, and only know them by their printed Bills, and the Imperfections with which they abound.*

Erratum, *p.* 19. *l.* 12. *for Major, r. Monſieur.*

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A more



A more Particular

METHOD

For the RAISING

Italian Brocoli, Spaniſh Cardoon, Celeriac,

Finochi, and other foreign Kitchen-PLANTS;

So as to make them more uſeful Diſhes than hitherto they have been.

BROCOLI (not *Brocula*, as by ſome erroneouſly wrote) is, according to Mr. *Evelyn* in his *Acetaria*, the *Helmerida*, or rather (as *Delacampius*, in his Edition, will have it) the *Ilmeridá* of *Pliny*, a Kind of *Italian* Kele, or Colewort, which grows on the Sea-Coaſts about *Naples*, and other Places in *Italy*; from whence the beſt Seed is yearly exported, that which is ſav'd in *England* being little worth. *Of the* Brocoli.

" Since the writing of this Article in the firſt " and ſecond Edition, I have met with a Perſon " who was for ſome Years Gardener to the *Britiſh* " Embaſſy at *Conſtantinople*, and came over along " with Mr. *Wortley Mountague*, to whom he is now " Gardener at *Twickenham*, who aſſures me it is a *Seed laſts above a Year good in* England.

" Miſtake to ſay, that *Brocoli* Seed will not do
" well above one Year; for that he has ſown it for
" 5 or 6 Years ſucceſſively, in his Maſter's Garden,
" and that it holds the ſame as it was at firſt, and
" I have ſome of his Plants now growing by me,
" which are like to prove well; from whence this
" Conjecture of its not doing well above one Year
" aroſe, I can't tell: The greateſt Difficulty that
" attends this Affair in the getting Seeds from a-
" broad, is the great Cheat that thoſe People, who
" gather it on the Sea-ſide, put upon the Merchants,
" and conſequently upon us here, has been a great
" Hindrance to the uſing it for this Year: For
" tho' I ſaw the Bag juſt brought from the Water-
" ſide, and mark'd with an *Italian* Mark and Cha-
" racter, and ſaw the Bill of Parcels, *&c.* in the
" Importer's own Hands, yet when it came up, it
" was nothing elſe but Turneps; ſo little Faith is
" to be found amongſt thoſe Collectors of Seeds,
" who no doubt think it no Sin to cheat Hereticks.
" But in order to obviate this, I ſhall for the fu-
" ture offer no Seeds to ſale which come from a-
" broad, (eſpecially from thence) but what I try
" firſt in my own Garden.

The ſeveral Kinds of Brocoli.

There are three ſeveral Kinds that I have had growing in my Garden near *Vaux-Hall*, theſe two Years, *viz.* That with ſmall whitiſh-yellow Flowers, like the Cauleflower; others like the common Sprouts and Flowers of a Colewort; and a third, which is, in my humble Opinion, the beſt of all, that with purple Flowers; all which come mix'd together, none of them being as yet (at leaſt that I know of) ever ſav'd ſeparate.

Seaſon of ſowing it;

The Seed is in general to be ſown at the ſame Seaſon; and order'd, during the firſt four Months of its Growth, like the Savoy; but for the particular Method of Cultivation, the following Rules are to be obſerv'd.

In

In the firſt place, the Seed is to be ſown in as good a Soil, and in the ſame Manner as Cauleflowers, Savoys, and other Cabbages are, about the latter End of *April*, or Beginning of *May*: For whoever defers it till Midſummer, is in the wrong; becauſe the Stems will not be ſtrong enough, before the Winter comes in to produce that Number of Sprouts, which otherwiſe they would. *In* April *or* May.

The next thing to be done, is the tranſplanting them out of the Seed, into the Nurſery-Bed, in the ſame Manner as all other Plants of this Kind are, in about a Fortnight or three Weeks after they are ſown, and watering them in dry Weather, as Occaſion ſhall require; and ſometimes about the latter End of *June* or Beginning of *July*. When you perceive the Plants are ſtocky, and ſtrong enough they are to be tranſplanted, at ſome two or three Foot aſunder, on round Hills, like Hop-Hills, in a warm well-ſhelter'd Place; for I find even in my Garden, which lies ſo near *London*, that our Winters are a little too ſevere for it, ſeveral of the green Tops and Flowers being ſo nipp'd and pinch'd thereby, that they have rotted and decayed away. The Soil wherein they are planted ſhould be alſo very good and full of Salts; ſince it is in the Shortneſs and Juicineſs of the Sprouts that the Goodneſs of *Brocoli* conſiſts. *Tranſplanting the* Brocoli.

During its being planted thus out, it will form a Head like the common Colewort, ſome of which Heads (about a Fortnight before *Michaelmas*) muſt be entirely cut off, about a Foot and a half, or two Foot above Ground, from the Stem of which thoſe Sprouts proceed, which are afterwards to be boiled and eat as Aſparagus itſelf, and therefore by ſome called *Italian* Aſparagus; but I would not adviſe the heading your Plantation altogether at one Time; but divide it into three Parts; one Part whereof is to be cut then, the other Part a *Pruning the* Brocoli.

Month after that, and the laſt about a Fortnight or three Weeks before *Chriſtmas*; by which means there will be a continued Succeſſion of the Sprouts, from about a Month before *Chriſtmas* to our *Lady-Day*.

Dreſſing the Brocoli. I ſhould have noted, that as ſoon as the Heads are cut off, the Gardener ſhould apply ſome Sea-Sand or Coal-Aſhes, or, which is as good, or better, than either of them, (on Account of its fiery ſallacious Quality) ſome Pigeons Dung, in a Pan or Hollow made round the Root; and, if the Weather is dry, they ought to be well water'd with Pond-Water.

The Reaſon that I adviſe the planting the *Brocoli* on Hills, like Hop-Hills, is, that thereby you may at the laſt heading, which is about a Fortnight before *Chriſtmas*, as before mentioned, and when the Roots are well earth'd up and pann'd, and the Pigeon-Dung laid on, that all the Alleys, and round thoſe Hills, may be filled with hot Dung, to accelerate and favour the Growth of the Sprouts.

More Obſervations in Relation to Brocoli. " If your *Brocoli* ſucceeds well, and likes its Soil, " it will form a very fine Head, full of Sprouts " by *Michaelmas*, as it has done this Year with me; " theſe Sprouts may be entirely cut off and eat, " or given to your Swine, for they will ſprout out " and ſhoot again before *Chriſtmas*; or you may " preſerve ſome of the top ſmall Shoots till the " Froſts come in, at which Time they will be in " their greateſt Perfection; where note, that even " your large Shoots which came out before, may " be cut off, and the outſide tough Part peel'd " with a fine Knife before you boil, only uſing a- " bout 6 or 8 Inches of the Top.

To conclude; Another great Reaſon why I adviſe the heading of the *Brocoli* at ſeveral Times is, becauſe the Sprouts will otherwiſe grow hard and tough; they ſhould therefore on that Account, not only

only be headed at different Times, but the Sprouts (ſome of which will come on faſter than others) be gathered whilſt they are young, not above ſix or eight Inches long, before they come to flower, and about the Bigneſs of a Man's little Finger at moſt; and then it is, I think, an excellent Diſh, at leaſt much better than any other kind of Sprouts.

Other Times and Methods of managing it.

" To compleat this Account, and to make the " raiſing of *Brocoli* more perfect. If you have a " mind to have a continual Succeſſion of *Brocoli*, " quite to our *Lady-Day*; beſides the Methods of " heading at different Times before mention'd, " you may ſow more Plants in the latter End of " *May*, or Beginning of *June*; and again, the " latter End of *June* or Beginning of *July*; but " then you muſt plant them out in the richeſt " warmeſt Soil you can, and by no means in wet " clay Land, where they won't do; theſe Plants " ſtanding under ſome Reed-Hedge, and on Hills, " may, by the Application of Coal-Aſhes, long " Dung, *&c.* be headed and made to ſprout again, " during the whole Months of *March* and *April*; " after which Time, Aſparagus, and other Vege- " tables come in, which are undoubted Rivals of " the *Brocoli*.

Of the Spaniſh Cardoon.

The CARDOON, generally call'd the *Spaniſh Cardoon*, becauſe it is very much us'd in that Country, the beſt Seed of which being imported from *Italy*, is, by *Botanicks* call'd *Carduus Eſculentus*, or *Eating Thiſtle*, a kind of wild Artichoak, the Seed being form'd in a Head, not much unlike the Head of that uſeful Plant.

For the Form of the Seed, Raiſing, and Culture, of the *Cardoon*, take the following Account, being very near the ſame which was ſometime ſince publiſh'd in my *Practical Kitchen-Gardener*, p. 160. which I repeat here, becauſe that Book may not have

have fallen into the Hands of all, that may buy this Pamphlet.

Shape of the Seed. The Seed is of an oval Form, and about the Bigneſs of a Wheat-Grain, of a very dark-green or blackiſh Colour, mark'd with black Streaks from one end to the other; the firſt Crop of which, is ſown about the Middle of *April*, and the other at the Beginning or Middle of *May*.

Some there are, who ſow them on Beds well prepared with Dung rotted to mold, or on Hot-Beds when the Heat is going off; and after that plant them out into Trenches or Pits, as they do Celery; but the *French*, as Mr. *De la Quintinye* tells us, ſow the Seed immediately in Pits, a full Foot wide, and ſix Inches deep, filled with good Mold, and in Beds made four or five Foot wide, in order to place in them two Ranks of thoſe little Trenches or Pits, chequer-wiſe: They put five or ſix Seeds in every Hole, but with an Intention to let only two or three of them grow, if they all come up, taking away thoſe that are over and above that Number, to ſupply thoſe Places where perhaps none came up, or any other Vacancies.

Manner or Method of ſowing. But it is good to have ſome ſown on a Hot-Bed, or on ſome Bed where the Heat is expiring, as before; theſe being covered with Pieces of old Mats or Straw, ſhould be opened in fifteen or twenty Days, to ſee if they ſprout; if not, you may conclude the Seed is bad, and ſo ought to ſow more. The Seeds of the firſt ſowing are generally three Weeks, and the laſt fifteen Days, in coming up; but muſt not be ſown before the latter End of *April*, or Beginning of *May*, being apt to grow big, and run to Seed in *Auguſt* and *September*, and then they are not good; for which Reaſon great Care muſt be taken to water them, becauſe that will hinder them from ſeeding; and when towards the latter End of *October*, you have a mind

a mind to whiten them, you take the Advantage of ſome dry Day, to tie up all their Leaves together with Bands made of Straw, or long Litter, well twiſted about them, ſo that the Air may not penetrate nor come at them, except it be at the very Top, which is to be left open.

Inſtead of earthing them up, as you do Celery, you are to apply long Horſe-Dung to whiten them.

Theſe Plants thus tied up and covered, will whiten in about fifteen Days, or three Weeks, and grow fit to eat. Thoſe who make uſe of them to any Purpoſe, continue tying them up, and covering them, till the Winter approaches, and then take them up, and tranſplant them into the Green-Houſe, or Cellar, (as Cauleflowers are ſerv'd) to have them all the Winter; ſome of them are good to tranſplant in the naked Earth in the following Spring, to ſeed in *June* and *July*, or may, when cut down, be left to ſpring, and be whiten'd again the ſucceeding Summer.

What I have to add to this Account is, concerning the Dreſſing and Eating of them.

Dreſſing the Cardoon.

The *French*, as Monſieur *De la Quintinye*, or Mr. *Evelyn*, I think, ſomewhere obſerves, ſerve them up, *a la Poverade*, with Oil and Pepper; and there are a great many Gentlemen that like to eat them thus raw, being, as they ſay, preferable to Celery.

Beſides the Uſes the French *make of the* Cardoon, *in eating it raw, (as they do likewiſe in* Spain *and* Italy, *from whence the Seed comes) our* Engliſh *Cooks ſtew it in a Pan, as they do Celery, finding it to be much better that Way than Celery is, becauſe it eats much ſhorter; and does as it were, melt in the Mouth, at the ſame Time that the Celery eats tough and ſticky.*

" Since

Farther Inſtructions about dreſſing the Cardoon.

" Since the writing of the aforeſaid Account, " an eminent Cook tells me, that the *Cardoon* " ought to be (what they call) blancht, which is " an Infuſion into warm Water for half an Hour " or an Hour, whereby the Bitterneſs that is " natural to the *Cardoon*, will by that means be " taken off, and then they may be ſtew'd with " a little Butter, *&c.* tho' my Inſtructer tells me, " that they ſtew well with a little Suet.

This being what I have received from my Friend the Cook, and another Gentleman of undoubted Ingenuity and Integrity, I could not but add it in this Place, with which I conclude what I have to ſay on the Account of the *Cardoon*.

Of Celeriac.

The CELERIAC is a fine Kind of Celery, which is in great Eſteem about *Naples*; but the Seed is imported to us from *Alexandria*. It is undoubtedly of the *Petroſeline* Family, the Seed being ſo exactly like our common Celery, that it is not to be diſtinguiſhed from it.

I can't ſay that I ever ſaw the Plant, except it be what we have commonly had under the Name of the *Italian* Celery; but as it has been recommended to me by ſome very curious and ingenious Gentlemen, I have procured a good deal of it from a Perſon who had it directly from *Alexandria* itſelf; and ſhould it be no other than the *Italian* Celery juſt mentioned, it would be a uſeful Plant, it producing a much ſtronger Root, and conſequently a greater Number of Shoots, or Leaves, than our common Celery does; and they eat, in my Opinion, ſhorter and not ſo tough nor ſticky as the Celery does.

I need not ſet down the various Uſes to which theſe Plants are put; nor much of the Manner of raiſing and whitening of them, it is ſo like that of the common Sort; but that in order to prevent

prevent (as much as poſſible) the piping or running to Seed of all theſe Kinds, they can't be too often tranſplanted, or dug about, even though they are put down again in the ſame Place where you take them up; which is all I ſhall at preſent add in this Place.

To make this ſhort Account of *Celeriac* more perfect, I ſhall in this place inſert a Letter I have, ſince the writing of this Pamphlet, received from a very ingenious Perſon in the *North*, who has the Care of ſome conſiderable Gardens belonging to a Noble Lord, very well known amongſt Architects, I mean the Right Honourable the Earl of *Burlington*; which Letter take as follows:

Lanesborough,
July 13. 1728.

SIR,

" HAVING *read the ſecond Edition of raiſing* Brocoli, Celeriac, &c. *and the Deſcription* " *of that good Plant which you ſuppoſe to be the* Italian-Celery, (*tho' very different from it*) *I preſume to* " *ſend you this Account of it. The* Celeriac *is a low* " *dwarf Plant, in Leaf ſomewhat like to common Cele-* " *ry, but much ſmaller, and the Root almoſt bulbous, or* " *rather knobbed, and about the Size of a large Apple,* " *or ſmall Turnep; and therein greatly differs from* " *either the* Italian *or common Celery: Beſides, it is* " *not ſo apt to pipe* (*as we term it*) *as thoſe other Sorts* " *beforementioned do, which being a peculiar Property* " *of this Kind, makes it ſo very valuable to every one* " *that has it.*

" *It may be ſown at any time in* March *or* April, *on* " *a hot Bed, and from thence planted directly in* " *Trenches* (*which for the Reaſons by and by to be given,* " *ſhould not be very deep*) *by drawing out the largeſt* " *firſt, and ſo on to a ſecond and third Size one after an-*

" *other; and then you may earth them up, as you do*
" *common Celery, about a Month before you want it.*
" *I hope, Sir, you will excuse the Freedom I take in*
" *giving you my Opinion, having always had a Respect*
" *for your Endeavours in Husbandry and Gardening,*
" *ever since you commenc'd an Author. Your Introduc-*
" *tion to and Manner of handling those beloved Subjects,*
" *(the Sale of which I have endeavoured to promote)*
" *being in great Esteem with me; being (as I think) the*
" *most useful of any that have been wrote on these useful*
" *Subjects.*
" *If on any Subject, you shall hereafter revise or write*
" *farther upon, any Communication of mine, will be use-*
" *ful or serviceable to you, I shall be very ready to do it.*
" *I heartily wish you Success in whatever you under-*
" *take, as it tends to a publick Good; And am,*

Your's, &c.

THOMAS KNOWLTON.

" To this let me add what I have just now
" hinted at, that this *Celeriac* should not be plant-
" ed out in deep Trenches from the Nursery-Bed,
" but almost at the top of the Ground, for as
" it is but a short Plant the burying of it so
" deep as you do common Celery is needless.

Of the Finochi.

The FINOCHI, or *Italian Fennel*, is also a Dish in high Esteem in *Italy*, from whence it has been brought to *England*, and amongst other Seeds, by that curious and dispatchful Nobleman and Gardener, the Right Honourable the Earl of *Peterborough*, in whose Garden, at *Parsons-Green*, it is cultivated with great Success.

There are several Kinds of it, but that which is the lowest and most bushy is the best.

It may be sown almost at any Time of the Year, but *May* is the chief Season: Though, if you

you have the Convenience of a Green-Houſe, or of Frames, which are generally diſuſed in Winter, you may ſow it in the latter End of *July*, or Beginning of *Auguſt*, and then it will afford you a moſt excellent Diſh (when houſed) all the Winter. *Time and Manner of ſowing it.*

There is no more Trouble in the ſowing and raiſing of it, than there is in common Fennel or Celery; but the Method of blanching or whitening, as practiſed by that Right Noble Lord, is ſomewhat different.

After the Seed is come up in the Nurſery-Bed, and the Plants are ſtrong enough to plant out, you are to ſet them at eighteen Inches Diſtance, or more, that you may commodiouſly come about them, to earth them up: They will want to be water'd ſeveral Times, as the Heat of the Seaſon requires, in order to keep them from ſeeding, and to make them grow groſs and large; but the greateſt Care is in the blanching it. *Of the Planting out of* Finochi.

After it is ty'd up, as you do Celery, you are to get the fineſt Virgin-Mold, or Sandy Loam, you can; for dungy Earth is not only ſubject to make it cankery, but alſo to taſte dungy and ſtrong, (which, by the way, is a good Caution in the earthing up of *Celeriac*, common Celery, *&c.*) with which Virgin-Mold you are to earth up your Fennel; and as ſoon as it is whiten'd, you may eat it.

When you come to eat it, you are to cut off the Fangs, or long Roots, of the Fennel, as well as the fibrous Parts, preſerving the Knob with great Care; then you are to pare off all the Out-ſide, both of the Root and Leaves, leaving only the Heart, and knobbed Root of it, in the Nature of a Pyramid.

" Since the firſt and ſecond Edition of this Pam- *Additions to this Account.*
" phlet came out, I find Gentlemen differ as to
" the Method of eating of *Finochi*; ſome chuſe to

" eat it green, others white; all which must be " left to every particular Person's Option: But if " it be to be whiten'd, you cannot be too careful " in tying it up, and putting the driest, healthiest, " cleanest Mold, or Sand, you can, for this Year's " Experience tells us, it is otherwise apt to rot in " in the Inside.

" And by this Year's Experience I also find, " that the sowing of the *Finochi* in *May* is too soon " for a general Winter-Crop, it being very apt to " run to Seed; it is a Plant also which to me seems " not very proper to move; that it should be " sown in a Trench, as *Cardoon* is, for that by that " means it may be blancht the better.

I think no body can project the raising of this Plant at several Seasons; and, if possible, in all the Months of the Year, by sowing the Seed under Frames, and keeping the Plants earth'd up, successively one Crop under another. Sure I am, that there is not in the whole Compass of Nature (amongst Plants which are used to be eat) a more noble Aromatick, a greater Reviver of the Spirits, nor a greater Sweetner of the Blood, than the *Finochi* is; nor is there any Plant that can contribute to the Preservation and Enlargement of Life more than the *Finochi* will.

The Manner of eating Finochi.

It is generally, by the *Italians*, eat with Pepper, Oil, and Vinegar, as other Sallads are; but the Noble Lord, of whom mention has been now just made, eats it with Salt only.

" Besides the manner of eating it raw, the *Ita-* " *lians* make a fine Water, which they call *Finochia*, " which is very wholesome, and in great Esteem, " and which they transport to *England*.

Of the Mushroom.

The MUSHROOM, being a Dish of that Delicacy, as it is generally esteem'd, requires I should say something of it, in Addition to what I have in my

my *Practical Kitchen-Gardener* already ſet down. And firſt I obſerve, that my Predeceſſor, Mr. *Price*, had a Quantity of the Spawn, which was ſent him from *France*, part of which I have now propagating by me, having diſpos'd of the reſt.

" *Mathiolus*, and other Authors of Antiquity, " give a long Account of the raiſing of Muſh- " rooms, from a certain petrify'd Stone they " find about *Naples*; and many Experiments have " been made, at leaſt related, by my Lord *Bacon*, " and others, in *England*, which have been already " related in another Work. But our beſt Way " now is from the Fibres and Buttons, which are " dug up out of the Ground in the Fairy-Dances; " or tranſported from abroad, and kept dry in " Bags.

The *French* Spawn is in great Requeſt amongſt Muſhroom Raiſers; but there is one kind in that Part of *Yorkſhire*, which they call *Craven*, of which I have heretofore made mention, which I am inform'd much excels it: inaſmuch as Mr. *Ray*, in his *Hiſtory of Plants*, (*ſub titulo Fungi*) tells us, it boils as white as a Curd; and I have heard from a Gentleman, who has been a Reſident in that County, that about *York* itſelf they have a kind of Muſhroom, which pickles as white as Snow; ſo that if one could but procure the Spawn from thence, I don't ſee why it may not excel even the *French* Spawn itſelf.

The Account of this Kind of Spawn, I find in the Tranſactions of the *Royal Society*, as given by Dr. *Liſter*, to grow in the Woods of *Marten* in *Pinnomoor*, in that Part of *Yorkſhire* call'd *Craven*, and have ſent to my Friend Mr. *Knowlton*, who favour'd me with the Letter concerning *Celeriac*, juſt now recited, to ſee if I can procure any Spawn of it.

The greateſt Difficulty is in raiſing it; for tho' you take all the Precautions that have been deli-

ver'd

ver'd down by myſelf and others in Books, the Muſhroom will not be compelled by any Art we are Maſters of, to come up at our immediate Deſire, or when we pleaſe; but when we have made all the Preparation we can, we are obliged to wait Nature's own Leiſure.

And the more eager our Wiſhes are, the farther off one ſeems to be from producing this valuable Excreſcence. A Gentleman has often told me, and I find it by Experience myſelf, that during my Attention to ſee them grow, myſelf as well as my Friend, was always diſappointed; but upon going a long Journey, and taking no Heed at all, then they grew, as it were, of themſelves.

When you take up the Spawn of the Muſhroom, either on the Downs or in a Garden, in order to tranſport it, you muſt do it in as dry Weather as you can, putting it into a Bag, and if you don't plant it immediately, hang it up in ſome Bag, in a Place moderately dry; for if it be moiſt (as in a Cellar, *&c.*) then it will be apt to ſprout, which ſpoils the Growth of the Spawn when you plant it.

There is no doubt to be made, but if you would plant the Spawn of Muſhrooms in Earth, in a moiſt Cellar, but they would grow, (but how wholeſome they would be I can't determine,) for I have been informed by my ingenious good-natur'd Friend Mr. *Bradley*, that ſometime ſince when he had Occaſion to read Lectures on Plants, which he did weekly, the Spawn and Button of the Muſhroom had viſibly ſwelled and increaſed, being laid in the Cellar only. In my opinion, therefore, one of the beſt Ways of raiſing Muſhrooms would be under an Awning, or Covering, like that in which we draw the dry Stems of Oranges which come from *Genoa*, keeping the Extreams either of Heat or Wet from them; yet that this Awning being

being open at both Ends may admit of a due Perſpiration or Paſſage of Air thro' it, taking the Awning away whenever the Dews, which are the only Advantage the Muſhroom has, fall. Another Way might be, by making a Straw Cover, like that I have directed for the *Aliſander* in my *Kitchen-Gardener*; for the laying long Dung does, in my Opinion, rather ſuffocate than forward the Muſhroom.

Of white Chervil.

To the whiten'd Sallads before recited, and which are the beſt that the Garden produces, give me leave to add that of whitening or blanching *Sweet Chervil* and *Parſley*; both of which, when whiten'd, are very extraordinary Sallads, being uſeful either in Soops, or to eat raw, as any of the Winter Sallads are; the Strength of the one being abated by whitening, as the Coarſeneſs of the other is raiſed thereby.

When you have a mind to whiten theſe two Herbs, you muſt ſow them in the richeſt Land you have, that they may grow as groſs as poſſible; and the Time of Sowing ſhould be about the middle or latter End of *June*, that they may get Strength and grow large enough, before Winter comes in to whiten, and yet ſo ſoon as that the Heat of the Sun may not force them to Seed, which they are too apt to do.

They will whiten with any Sort of Mold, but that which is of the Virgin-kind, and inclinable to Sand, is, in this, (as well as all the other Herbs to be whiten'd) the beſt; nor is there any Difference in the Care and Culture of it; for being once tied up, which ought to be done when the Weather is pretty fine and dry, to prevent their rotting, you are to tie them up; and when they are thus tied up and earth'd, they will be blanch'd and fit to eat in twenty Days, or thereabouts, and are of the Number of the higheſt Aromaticks, as well

well as Diureticks, that that Seaſon produces. The common Celery (which is the only Fault of it) being too apt, without often removing, watering, *&c.* to run to Seed, and ſo not to be had late, *i. e.* after *Chriſtmas*, for this Purpoſe.

Of the Aliſander.

The laſt Sallad which I ſhall produce, is the ALISANDER, a kind of Plant, the Raiſing of which is not much known in *England*, nor is the Seed (as I know of) to be had here: It is often called the the *Macedonian Parſley*, being undoubtedly of the Petroſeline Family; and its Excellence is, that you may have it clean, unſeeded, and unſticky, when the Celery is piped and gone. The Method of raiſing it I have ſet down at large in my *Practical Kitchen-Gardener*; but as that Book may not be in every Hand, I ſhall recapitulate what is there wrote, in order to the making the Knowledge and Uſefulneſs of this Plant more univerſal.

Time of ſowing.

The Seed is to be ſown about the latter End of *April*, and Beginning of *May*, pretty thin, becauſe it produces a great many large Leaves; and at the End of Autumn, (*viz.*) about a Fortnight or three Weeks before *Michaelmas*, all the Stalks and Leaves are to be cut down, and then cover the Bed again with long dry Dung, or Straw-Screens, ſo cloſe that the Froſt may not come at it; by which Means the new Leaves that ſpring forth will grow of a whitiſh-yellow Colour, and tender.

It would ſeem a little ſtrange that this Plant ſhould be no more uſed, were it not that Celery, its near Relation, was ſo great a Rival to it; but it has this to recommend it before Celery, that it partakes of almoſt all the good Qualities of Celery, and will, by the Treatment before ſet down, laſt much longer before it runs to Seed; which may not be diſpleaſing to thoſe that love to eat blanch'd Sallads a good while in the Spring.

And

And thus I have, as near as I can, in the Hurry this ſmall Treatiſe is wrote, ſet down all that is neceſſary as to the raiſing and propagating ſome foreign Sallads in more Perfection than they uſed to be.

CHAP. II.

Of the LA LUCERNE, St. FOYNE, REYGRE, CLOVER, TREFOYLE *or* NONSUCH, *and other Seeds for the Improvement of Land.*

HAving during the ſhort Time I have kept a Seed-Shop in *Weſtminſter-Hall*, been ask'd a great many Queſtions as to Seeds for the Improvement of Land; that is, of the Quantity proper to be ſow'd on an Acre, and of the Soil proper for each particular Kind of Seed, I thought I could not conclude this Pamphlet better than by a particular, yet as conciſe an Account as I could, in this little Time procure, eſpecially ſince the Seaſon for ſowing them is now expiring, and many of the Nobility and Gentry making their Retreat into the Country, about their innocent and pleaſurable Affairs there.

Of the La Lucerne.

The Raiſing of the LA LUCERNE is a Graſs that, amongſt others, I have had the moſt Queſtions aſk'd about; and the Enquiries I have made after the Soil and Culture it requires, has been attended with no leſs Difficulty; ſome affirming that is loves a poor Land, others a rich, and a third, equally ſagacious, that it will not do in *England* at all, nor is it worth our ſowing.

If we conſult Authors in Print, they are as ſilent and ſhort as any body: It was a Graſs little known

to thoſe who firſt introduc'd the Art of Huſbandry into *England*. Mr. *Turner*, in his printed Account of Graſs-Seeds, ſays of it, that it is an excellent Fodder, and, by ſome, preferr'd before *Saint Foyne*, as being very advantageous to any dry or barren Ground: That ſome ſay it requires a moiſt and rich Soil; and others, a dry one; from whence he concludes, that it has prov'd well in all. But Mr. *Mortimer* ſeems to deſire to be excus'd from any Account at all of it, when he ſays, that the Seed coming from *France* in the War-Time, had prevented its being ſo much propagated, as otherwiſe it would have been; and therefore, that he could not find ſuch Obſervations made about it as might be expected.

To all which in general I anſwer, that in good Ground, which will bear Crops of a greater Kind, it is, perhaps, not worth the ſowing, there being few Gentlemen that would loſe Ground of 40 *s.* an Acre, for the ſake of the beſt Graſs-Seed that grows; but I muſt own I ſuſpect, that the not growing, and even the not proſpering of this Seed, is owing to the Negligence and Lazineſs of the Huſbandman, even in poor Lands, I mean, in their not Fallowing, or Ploughing and Harrowing their Lands three or four Times, and thereby reducing it to a fine Powder; ſince this, as well as the *Saint Foyne*, and moſt other Graſs-Seeds, ſeem to affect the beſt Preparations you can make for them, I mean, as to the Fineneſs of the Ground, altho' it be poor, and then you may expect Succeſs.

" Since the Publication of the firſt and ſecond " Edition of this Pamphlet, I have had the Op- " portunity of being informed, in part by Reading " and in part by further Accounts I have had " from Gentlemen of great Veracity, all that I " think is neceſſary to be known as to the Raiſing " and uſe of *Lucerne* or *Luzern*.

" I ſhall

" I ſhall paſs by, at preſent, the Accounts pub-
" liſh'd by ſeveral Authors of good Repute, as to
" what relates to the Etymology and Derivation of
" this uſeful Plant, and of the Countries which ſeem
" to claim it as a Plant of their own; of this the
" *Spaniards*, as well as *French*, ſeem to glory; and
" ſhall only ſay of it, that it is certainly the Me-
" dick Fodder of the Ancients, as being carried
" by the *Greeks*, after the Wars with *Darius*, into
" *Greece*, where they gave it the Name of the Coun-
" try from whence they brought it; but that this
" Graſs has its preſent Name from *Lucerne*, or *Lu-
" zerne*, one of the Cantons of *Switzerland*.

" The Ground they chuſe to ſow it upon in
" *France*, as I find it in Major *Pomet*'s Hiſtory of
" Drugs and curious Plants brought into that King-
" dom, is a ſandy ſpringy Land, or ſuch whereon
" the Water may be carried, as on Water-Mea-
" dows. And I have been told by a very curious
" Gentleman, that at or about Port *Mahon*, in the
" Iſland of *Minorca*, (which Port or Garriſon is now
" in the Hands of the *Engliſh*,) there is but one
" Farmer, of any Account, who ſows this *Lucerne*
" to cut green, for the feeding of his Cattle, eſpe-
" cially Cows and Horſes, that his Ground is ſan-
" dy, and that having the Opportunity of float-
" ing his *Lucerne* as ſoon as it is cut, it will be fit
" to mow again in 14 or 15 Days time; and that
" conſequently he divides the Ground he ſows with
" *Lucerne* into 14 or 15 Parts, which he cuts in
" their proper Order.

" And this Account ſeems to agree with what
" the *French* and other Authors ſay upon this
" Head.

" This points out to us the Uſes to be made of
" this Plant, (*viz.*) to cut green for the Uſe of
" our Horſes and Cows, the laſt of which will give
" a good deal of Milk thereby, and this perhaps

" is a better way than to make it into Hay; but
" Cattle muſt not be ſuffer'd to go into it to feed
" becauſe it is ſurfeiting; but if ſparingly us'd, it
" is allow'd by all that have ſeen or us'd it, a moſt
" excellent Fodder to fatten poor Cattle, or cure
" thoſe which are ſick, either green or in the Hay,
" which in hot Countries may well be mown 5 or
" 6 times in a Year, and with us 3 or 4 times.

" To be ſure (as Admiral *Hughes* and others
" confirm) it is beſt to ſow *Lucerne* on ſandy Land,
" and if there is no Water, the Moiſtneſs of our
" Summers will be equivalent to it; whilſt in
" Countries ſo hot as *Sicily*, *France*, or *Spain*, there
" is an abſolute Neceſſity for ſuch Refreſhments.

" The Rules for ſowing it, either earlier or later
" as before preſcrib'd, hold to be good, for the
" Reaſons there alledg'd; but whether the ſowing
" Peat-Aſhes, Sea-Sand, or Malt-Duſt, as pre-
" ſcribed in the firſt and ſecond Edition, I can't
" well tell, a very ingenious Gentleman and Friend
" of mine ſeems to diſtruſt it; the ſame Gentle-
" man ſays, that in good Ground the Weeds are
" apt to grow up with it and confound it; ſo that
" he adviſes the ſowing it in Drills, by which
" means the Weeds may be the eaſier cut up with
" the Hoe in earthing up the *Lucerne*.

" A Phyſician of *Suſſex* tells me, that in order
" to prepare and bring his Ground into a proper
" Tillage, he ſow'd his Ground the Year before
" with Buck-Wheat, which he plow'd in towards
" the latter End of the Year, and the next Spring
" he ſow'd it with *Lucerne*, and had prodigious Suc-
" ceſs; and the ſame might be done with Tur-
" neps, Vetches, or Tills, which are great Melio-
" raters and Enrichers of poor Land.

" All that I can gather by way of Corollary is,
" that clayey Land will not anſwer any Gentle-
" man's purpoſe to ſow it with *Lucerne*, and I am

" well

" well inform'd from Mr. *Ray*, and ſome curious " Gentlemen in *Wilts* and *Dorſet*, who have try'd " it a good deal, that it will not do very well in " their chalky ſtoney Ground; ſo that good red, " or ſandy Land of any kind, ſeems to be the " moſt proper for it, the firſt perhaps is too good, " but of the laſt there is enough to be had in many " Parts of *England*.

" It is a Seed that ought to be cover'd thin, nor " need you plow the Ground above 10 Inches deep.

" Ten or twelve Pounds will be ſufficient for an " Acre, if good Ground; but 14, 15, or, 16, in " poor Ground.

" If you ſow for a Continuance, then deep Soyles " tho' poor, ſay ſome, are the beſt, or if you ſow " to kill the Weeds; but if you ſow only for a " preſent Advantage, then any Land tho' never ſo " ſhallow will do, and the Improvement is as " great as you can wiſh for, exceeding whatever " you can expect from Vetches or Tares, when " they are plow'd.

" I ſhall finiſh this Account with ſome Paſſages " extracted from the *Appendix* to the firſt and ſe- " cond Edition.

I find that thoſe Gentlemen, who have been ſo good as to give me their Opinions as to *La Lucerne*, differ in their Accounts as to whether it is beſt to ſow it alone, or with or after their Corn; becauſe, ſay ſome, (eſpecially in ſuch a dripping Spring as this has been) the Graſs-Seeds will ſpring up ſo faſt as to choak the Corn. To this I anſwer, that as by the Directions before given, it appears, that you are not to ſow above two Thirds of the Crop of Corn you uſed otherwiſe to do; as for Inſtance, inſtead of three Buſhels, or three Buſhels and an half of Barley, which uſed to be allow'd in good, or four Buſhels and an half, or five, which uſed to be ſown in bad Ground, only two Parts in three is

to

to be ſown; *i. e.* inſtead of three Buſhels, or three and an half, two or two and an half in rich Ground, or three and an half, or four in that which is poor.

So likewiſe, if you lay your Graſs-Seeds down with Oats, inſtead of ſix or ſeven Buſhels to be allow'd in poor, or four or five in rich Land, only four or five muſt be allow'd in the firſt, and three and a half or four in the laſt; To this Note I likewiſe add, that the Graſs-Seed, let it be which it will, muſt be ſown as late as you can; that is, if you ſow the Barley or Oats the latter End of *March*, or Beginning of *April*, the Graſs-Seed ſhould not be ſown till the Beginning or Middle of *May*; in ſhort, when the Barley or Oats has gotten good Root; but not burniſh'd or ſpreading all over the Ground, then you may ſow your Graſs-Seed, and Buſh-harrow it over.

The Timorous will be, perhaps, afraid that ſuch Harrowing as we have been ſpeaking of, will hurt the Corn; but that is a great Miſtake, ſince there is no one Culture that belongs to a Huſbandman, which diſpoſes Corn and all other Vegetables, in a Garden or elſewhere, more proper for to make Corn bear well, than that Diſlocation which is near a-kin to Tranſplantation; for there are ſome, that in ſtrong Lands draw great tin'd Harrows over their Corn in *January* or *February*, by way of Tranſplantation. But to proceed and finiſh; as the Horſe which draws the Buſh-Harrow may be booted, as he is when you roll a Bowling-Green, it will prevent the Footſteps of the Horſe ſpoiling the Corn; which is all I ſhall add as to *Lucerne*, at preſent.

Of the Trefoyle *or* Non-ſuch.

The well-experienced Improvement of TREFOYLE, otherwiſe called *Nonſuch* Seed, and by ſome *Hop-Clover*, or *fine Clover*, (to uſe the Words of an eminent Dealer this Way,) is, *Firſt*, That it is a certain Rule, that all Lands naturally kind for Corn,

Corn, and unkind for Graſs, are undoubtedly kind for *Trefoyle*; and tho' it be ſo much impoveriſh'd by long ſowing, that it will bear Corn no longer, yet ſuch Land, being ſown with *Trefoyle* Seed, will become worth 20 *s.* or 30 *s.* an Acre. As for the Soil in which it will grow, he tells us, (and ſo does Experience too) that even clayey ſtiff Ground, and eſpecially chalky, rocky, and hilly Land, of a very ſmall Value, may be improv'd as above. But if the Land be a Clay, that then it muſt be laid as dry as you poſſibly can. That the Paſture of *Trefoyle* is as good, and much better than any for Cattle, and eſpecially for Cows; for it will not only cauſe them to give more Milk in Quantity, but alſo better in Quality, than other Graſſes will do; and likewiſe make Butter and Cheeſe of a delicate yellow Colour; that the Hay thereof is nouriſhing, and will make Oxen or any other Cattle, as fat as any other Hay, if it be mow'd and made in its Seaſon, that is, whilſt it is full of yellow Bloſſoms, and not over dry, (for 'tis ſoon made) it does not loſe its Colour, nor ſhrink in the making, as Clover-Graſs doth, but is much finer, greener, and, in all Points, better for Cattle than Clover is: That it is very good for fatting of Ewes and Lambs, and all other Cattle, and free from breeding Rottenneſs, which other Paſtures are apt to do: And whereas Clover-Graſs doth daily make ſick, and kill many Cattle, this is free from any ſuch Danger; and that Cattle are ſo ſenſible of it, that they will not willingly feed on the Clover, until they have eat the *Trefoyle* to the very Earth, as may be ſoon ſeen, if one half of the Field be ſown with one, and the other with the other; therefore if you are reſolv'd to ſow Clover, the ſafeſt Way is to mix one half of *Trefoyle* with it. That (in compariſon to Clover, *Trefoyle* will endure much the longeſt) if it ſtand not to Seed; for that is deſtructive to the Root, and

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the Sap is gone which ſhould nouriſh it, (becauſe it muſt not be cut late, and in the Heat of Summer) always provided the Ground be ſown with clean Seeds, and ſeparated from the Huſks wherein it grows; for if it be not, it will be impoſſible to cleanſe it from the coarſe and ſowre Graſs, which mixes amongſt it, and is ſo deſtructive to the *Trefoyle*, that it will not laſt half ſo long; for as the coarſe Graſs increaſes every Year, ſo the other will every Year decreaſe. The next Year after the Crop of Corn is taken off, you may paſture or mow it, which you pleaſe; but if it ſtands 'till the Seed is ripe, the Hay is ſpoiled, and the Cattle will not eat it.

The Time and Manner of ſowing it is when you ſow Oats or Barley, which ſhould be done after the following Manner; The Ground being ſown and harrow'd in with Corn, then ſow the *Trefoyle* Seed, and harrow it once in a Place, and then roll it, the Seaſon being good, and the Weather kind. The proper Time of ſowing is from the Middle of *March* to the latter End of *April*. An Acre requires 12 Pound, unleſs the Ground be very rough.

The only Soil (ſays my Relator) improper for this Graſs is barren ſandy Land, that will not bear Corn, and ſpringy Ground; though I muſt confeſs I have ſeen them grow on both theſe Soils; but not ſo well as in chalky Hills, Stone-Braſh, *&c.* To proceed, there is a Sort of Land (*viz.* a barren, blackiſh Sand, or Hazle-Mold) which is naturally kind for Corn, but being ſown ſome Years, is inclin'd to a Couch-Graſs, which Graſs is as deſtructive to it, as the other before mention'd is to *Trefoyle*, they being of a Quality much alike. Now where the Land is ſubject to this Graſs, (as moſt light Hazle-Molds, *&c.* are) the beſt Way is to plow your Land three Times before it be ſown; for this will not only deſtroy the Couch-Graſs, but alſo all other Weeds, if it be mow'd; and being plow'd again, before the

the *Trefoyle* be decay'd, and other Graſſes take place, it will bear far better Corn than before; and afterwards it will bear *Trefoyle* full as well.

What I have to add to this Account of *Trefoyle*, is, that it is one of the beſt Seeds to lay down your Fields with, (where the Soil is proper for it) Six Pound of this being mixed with one Buſhel of Rye-Graſs, or, which is better on all light Lands, the fineſt Seed well clean'd of the common Upland Meadow-Hay well choſe, and ſuch as is to be found in the Hay-Lofts of all Gentlemens Stables, who keep fine Running-Horſes or Hunters, and is indeed much better than Rye-Graſs, which is generally uſed. This ſowing of *Trefoyle*, or *fine Clover*, with Rye-Graſs, or Upland Meadow-Graſs, is much us'd in ſome parts of *Hampſhire* and *Wiltſhire*, in ſtony ſtubborn Land, on which (tho' Corn grows well) few other Graſs-ſeeds will.

It makes an excellent Fodder if cut ſoon enough, that is, before it grows benty and dry, on account of which they have a general Rule to cut it before *Midſummer*; and I have ſeen two Ton and a half, or three Ton, of Rye-Graſs and fine Clover mixt together, in Ground that would carry neither *Luçerne* nor broad Clover, tho' in the Neighbourhood of it there has been indifferent good *French* Graſs.

It is ſown in the Spring with Barley or Oats, as other Graſs-ſeeds are. This Method is alſo very proper for the ſowing of Garden-Walks, becauſe it comes up and burniſhes quickly, and mows eaſy, and is ſo complaiſant a Plant, as to give place to the Graſs, as ſoon as that gets ſome head, tho' a ſmall Quantity will ſtill remain. All theſe kind of Graſſes will grow exceeding fine (as will all manner of Turf-Graſs Walks that are decaying) by ſifting of Wood-Aſhes very thinly over them. And thus much of fine *Trefoyle*, *Hop*, or *Fine Clover*.

Of the Dutch *or* Broad Clover.

Notwithſtanding what has been before ſet down in Oppoſition to *Clover*, and in behalf of the Compariſon there is between that and the *Trefoyle*, the *Clover* is a very excellent and uſeful Graſs, but requires a tolerable good Land, and proſpers beſt in that which is rich, and light withal, where it will be a high Improvement, though the Ground were good and profitable before. It will alſo proſper and thrive on any Corn-Land well manur'd and ſoil'd, tho' it be a chalky Bottom, and which is Soil of a clayey Nature, as is a great Part of the Counties of *Hampſhire* and *Wilts*; and it is well obſerved, that Land which is too rich for Corn, cannot be ſo for *Clover*, but very poor Lands are not fit for it, unleſs burnt or denſhir'd, as moſt of the Down-Ground in the *Weſt* Country is, and then the laying it down with *Clover* is a very excellent Way.

The Quantity of Seed for an Acre (if you ſow it alone, and without Corn) is generally allow'd to be ten or twelve Pound; but if you ſow it with Corn, then four or five Pound is ſufficient; for if you ſow more, and the Spring proves to be wet, then the *Clover* will get a head ſo much, as to ſpoil the Corn; on which Account ſome don't ſow the *Clover* Seed till the Corn is juſt coming up, and ſo harrow it with a Buſh-Harrow.

The Uſes of *Clover* are ſo many, and ſo well known, that I need not repeat them; but there is one in particular that I think ought not to be omitted, and that is the Method they uſe in *Hereford*, and Part of *Glouceſterſhire*, and *Wales*, where they let their young Shoots or Pigs run and graze; which cauſes the Shoots to grow lengthy and larger, and is the chief Magazine from whence all thoſe Stores are brought, wherewith all or moſt of the *Weſt* Country Markets, as well as thoſe at *Smithfield*, and other Parts of *London*, are ſtock'd.

Another

Another great Uſe of *Clover*, is when a Man intends to improve his Land, without taking any Benefit of the *Clover* by Hay, and that is to ſow ſome Land which is moderately poor with this Seed, with a View of plowing the *Clover* in and ſowing it with Peaſe, Wheat, or any other Grain. In ſuch a Caſe you ſhould allow fifteen or ſixteen Pound of Seed to an Acre; and as the Ground (though poor) is ſuppoſed to be in good Tillage, you may plow it in about the Beginning of *Auguſt*, juſt before it comes to Seed; and this is as good or better than any Dunging; and beſides, you may turn in ſome fatning Cattle to eat the Head of it.

I ſhall finiſh this Account of *Clover*, tho' I am not fond of telling Stories, with one which is very remarkable. An honeſt Country Clergyman ſome Years ſince, who had a good deal of Glebe Lands in his Pariſh Fields, call'd his Pariſhioners together, and invited them into the Project of ſowing four or five Pound of *Clover* Seed in every Acre of Barley or Oats they were to ſow that Year, in order to have ſome *Clover* in their Fields that Autumn, (and the next Year when it was to lie unſown) for the feeding their Sheep; but his Pariſhioners being unwilling to do what neither their Fathers nor Forefathers had ever done before them, refuſed; on which Account their reverend Paſtor was obliged to ſow his own Ground by himſelf, the Effect whereof follows, *viz.* That all the Sheep fed no where but upon the Parſon's Glebe, and ſo by conquence improv'd it ſo much more, than that which belong'd to his Neighbours; that, whether they would or no, they were oblig'd to come into the ſame Meaſures the next Year.

Of Rye-Graſs Seeds.

The next Seed in courſe ſhall be the RYE-GRASS, a kind of Food, which when young, as in the Spring, is proper for the fatning of Horſes, or large Beaſts,

and is of very great Advantage for Milch-Cows, in that is cauſes abundance of Milk, making excellent Butter and Cheeſe, and is of great ſervice for Ewes and Lambs, or to feed any larger Cattle in thoſe early Seaſons of the Year, eſpecially if the Spring be warm, and the Wet does not lie too long, and before *Clover*, and other Graſſes come in, it being more quick than them; for in hot Weather, ſuch as the Months of *June*, *July*, and *Auguſt*, it grows harſh and dry, and is fit for nothing.

As for the Soil, Clay, and all other ſowre and uncultivated Land is proper for it, nor does it take up ſo much Tillage as other Graſs-ſeeds do, growing well amongſt the moſt ſtubborn Clods that lie in the Way, on which Account, where any Gentleman has any cold Land, it can't be better employ'd than in ſuch a Way, it being always obſervable, that thoſe Lands which are not fit for *Clover*, *St. Foyne*, *Trefoyle*, or any other Graſs-ſeeds, may be much improv'd by Rye-Graſs; it will laſt ſome Years; and what is of great moment, the feeding of Cattle is of great Advantage to it, becauſe it will in the Spring ſuſtain double the Quatity that other Lands will do, Acre for Acre; but then it is of no manner of ſervice in the Autumn, except it be a very drippy one, or for Hay.

The Hay it makes is very ſweet, and by ſome accounted better than that which is got in Meadows, eſpecially if it is mowed while it is green and tender; it ought to be hained the latter End of *March*, or Beginning of *April*, if you intend it for Hay; but be ſure you take all the Advantage you can of the *Spring*, it makes in *February* and *March*. Which is of more Advantage for the feeding of Ewes and Lambs or Milch Cattle, when there is no other Graſs, than the Hay itſelf.

There are two Seaſons of ſowing this Rye-Graſs, which vary according to the Uſes to which you put your

your Ground to; If you ſow Wheat, and the Nature of your Soil be ſo wet and cold, as that it will not make any Sward, then you are to throw in about three Pecks, or one Buſhel to an Acre, amongſt your Grain, ſowing it upon the Furrow after your Corn is harrowed in, and give it a harrowing, with the back of a Harrow, or of one made of Buſhes tied on faſt to it.

If you deſire to renovate and improve it, when in Decay, it can't be better done than by ſpreading of Street or Pond Dirt, and Lime mixed together, though either ſeparately by themſelves will do; the Nature of this Graſs only requiring that the Compoſition which is ſpread over it be enriching and ſtrong.

It being ſown one Autumn, it will be fit to graze the next Year with Horſes, and other black Cattle, when it may be fed as cloſe as poſſible; but the great Value of Rye-Graſs is its coming ſo early in the Spring, *viz.* in *March*, *April*, and *May*, for the Uſe of all ſorts of Cattle, who are then greedy of any thing which eats tender; and ſuch is the Advantage of it, that you may feed it ſooner in the Spring, than you can do any other Graſs, without danger of making it bleed.

Upon the whole, though Rye-Graſs is an Herb proper to be ſown upon cold, coarſe, auſtere Ground only, yet I have been often ſorry to ſee it admitted into Lands, which are warmer, and conſequently of too great a Value for it; for whoever would lay down any Land that is tolerably good, can't do it better than with the common Hay-Seed, which comes from the fineſt upland Meadow-Land, and a proportionable Quantity of Trefoyle, or Nonſuch mix'd with it, of which much has been ſaid already under the Head of Trefoyle.

If this Seed be ſown on Land entirely devoted to it, and on which, in all Probability, no Corn,

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(at leaſt but little) will grow, then two Buſhels is the leaſt that can be ſowed there.

This Graſs, if it be ſown by itſelf or with Corn, and ſuffer'd to be hain'd and cut for Hay, muſt be ſure to be cut before *Midſummer*, as was directed in the Article of fine Trefoyle or Nonſuch mixt.

Of the St. Foyne, *or* French Graſs.

The Improvements which have been within this twenty or thirty Years laſt paſt made in *England*, are very well worth taking notice of; ſince by it there are Precedents, in ſeveral Places, of Ground which was not originally worth above a Crown or ten Shillings an Acre, which has been improved to twenty or thirty, and ſometimes more.

The Land (tho' very poor and barren) which it chiefly affects, is, ſuch as has underneath it (at about ſix or eight Inches, or a Foot deep, at moſt,) a rocky ſhelly Ground, either of Stone or Chalk, wherein the Roots may run down, and expatiate themſelves with Pleaſure; for in rich Lands, or in hard Gravels, where there are no ſuch Rocks, the Roots have not Room to run down, and ſo it will either burn away, or the Weeds will deſtroy it. 'Tis on theſe Lands, I ſay, it proſpers the beſt; the Roots (tho' ſome deny that Part of the Poſition) being great, and running ſo deep that they are not ſo ſoon dry'd up by the parching Heat of the Sun, as all other Graſſes are; and this is the Reaſon why in the hotteſt Summers we have *St. Foyne* that will look green and flouriſhing, whilſt other Graſſes, as Trefoyle, Clover, and Rye-Graſs in particular, are in a Manner burnt up; all this we have from Experience in the ſeveral Counties of *Oxford*, *Glouceſter*, *Hants*, *Wilts*, and *Dorſetſhire*, where this uſeful Graſs is raiſing in great Abundance, on Lands of different Contextures, and different Bottoms of ſhelly Rock, Chalk, *&c.*

It

It muſt (ſays a judicious Seedſman) be ſowed in great Quantities, becauſe the Seed is large and light, either with Barley or Oats, the Ground being made extreamly fine, by plowing of it two or three Times, and giving it the large tin'd Harrow as oft; for in this Preparation it is (next the Goodneſs of the Seed) that the Succeſs of this, (and I may add moſt other Graſs-Seeds) conſiſts: But you muſt remember not to ſow your Corn too thick, *viz.* not above two Thirds of what you would otherwiſe allow; ſome there are who ſay, that you need not fear ſowing theſe Seeds too thick, for being ſo, they ſooner ſtock the Ground, and deſtroy all other Graſſes and Weeds. Mr. *Turner* ſays, that the Quantity of *St. Foyne* is four Buſhels to an Acre; but I am told by a Gentleman in *Dorſetſhire*, who has a good deal of it, that on their poor Lands they allow ſix or ſeven Buſhels; the poorer their Ground is, I ſuppoſe, the more Seed they allow, there being on the Top of many rocky, chalky Grounds, different Degrees of Soils, as there are on gravelly and other Bottoms.

I have not as yet met with any Experiments, which have been made to puſh the *St. Foyne* on, whilſt it is as yet young and tender, and juſt as it is coming up, but, undoubtedly, on all Lands that are very barren, ſuch adventitious Aſſiſtances muſt have a conſiderable Effect. If therefore, the Place you live in affords you either Sea-Sand, or Malt-Duſt, Aſhes made of Peat, Wood, Straw, Furze, or Bracain, or any other calcin'd Material, if duly and carefully applied, and not in too great Quantities, I believe you need not fear Succeſs.

" But this I ſay not from Experience, but Con-
" jecture, for ſome ingenious Gentlemen are of an-
" other Opinion, and think that the ſowing of any
" of thoſe calcin'd Aſhes will deſtroy, rather than
" forward thoſe Seeds.

" This

" This nevertheleſs does not entirely deter me " from that way of thinking. I am ſure in all ſorts " of Corn-Land they are exceeding good, and ex- " cept it be Peat-Aſhes a ſmall Quantity may be " us'd, even on the tendereſt Graſſes; however, " it will be of great ſervice to it when growing old, " as the next Paragraph but one explains.

The greateſt Care that is to be taken, is the not feeding this and other Graſſes at all the firſt Year, nor very early in the Spring the ſecond, becauſe it will be apt to bleed itſelf to Death: For the Sweetneſs thereof is ſuch, that it will provoke the Cattle to bite it too near the Ground.

It will laſt 15 or 20 Years very well; but then when it comes to be oldiſh, *i. e.* paſt 10 or 12 Years old, or ſometimes ſooner, you muſt now and then, once in three or four Years, lay a new dunging in the Winter, or in the Spring ſow ſome of the Aſhes, I ſhall next give an Account of, to give it new Life and Vigour.

Of ſeveral Things to be ſowed, or ſpread over Graſs.

Having in ſeveral Parts of this Account of the Improvements of Land by Graſs-ſeed of divers Kinds, made mention of Aſhes and Earths to ſow or ſpread over what Fields you have of that kind, that I may make it the more compleat, I have drawn up what follows.

For *Nonſuch* or *Trefoyle* about ten or twelve Buſhels of Wood or Kiln-Aſhes, ſown by Hand out of a Seedlip. But if you want to help it after it has been ſown ſome Years, fifteen or ſixteen Buſhels is the leaſt you can uſe.

Ryegraſs ſeldom wants any Aſſiſtance till after it has been ſown a Year or two; but when it does, you may allow twenty or thirty Load of the Shovellings of Streets, or Earth dug out of the Highways, and mix'd with ten or fifteen Load of Dung, and five or ſix of Sea-Sand, Lime, or Coal-Aſhes; and this

this is indeed a ſolid Improvement for any of the Graſſes before or after to be mention'd. To this may be added, three or four Load of Pigeon's-Dung, tho' ſome there are that uſe that Dung by it ſelf; but it is in my Opinion too fiery to uſe alone; beſides, it is a very difficult matter to get Quantities enough of it, to improve the many Acres of Graſs which are now ſown.

Of Peat-Aſhes.

In *Berkſhire* they have an Improvement for ſome Seeds, uſed juſt as the Seed is coming up, which is made of the Peat that is dug out of low moraſſy Ground and burnt, the Aſhes of which they ſay contain a great deal of Salt, and is of a wonderful fertilizing Nature: They allow fourteen Buſhels to an Acre, and ſow it by hand out of the Seed-lip, and obſerve it does well on Peaſe, but as for other Grain, they ſay it does Injury, by cauſing the ſame to run too much to Haulm. But as this may be a Fault owing to the Quantity rather than Quality of the Aſhes, I can't ſee why more moderate Uſe of it may not be well, in any Improvements of this kind.

The uſe of Lime, Sea-Sand, Rags, Shells, and other Improvements of that kind, are ſo well known, as not to need any more Explanation at preſent; nor have I now Time to ſhow how much theſe and all the other Improvements beforemention'd will contribute to the bettering of poor Land, if duly and in proper Quantities apply'd.

Of the Improvement of Land by burning Clay.

But the laſt Account of Improvements I ſhall give, (and which is, I think, the cheapeſt and eaſieſt to be come at) is an Improvement made by the burning of Clay; the firſt Experiment of which was made, as I am told, by the preſent Right Honourable the Earl of *Hallifax*, and is much practiſed in *Suſſex*; from ſome Gentlemen of which County I have had the greateſt part of the following Account.

The reddeſt ſtrongeſt Clays are the beſt for that Purpoſe (better than either blues or whites) and contain in them very great Quantities of Salts when calcin'd and burnt; and in the doing this (if I may uſe ſo mean an Expreſſion) they kill two Birds with one ſtone; for in the firſt Place they dig out their Clay, (which that Country much abounds in) to make their Fiſh-Ponds; and in the ſecond Place, they burn the Clay to Aſhes; which is the Improvement I am here ſpeaking of, and their Method of burning it, is what now follows.

I need not tell (common Reaſon dictating ſo much) that this burning of Clay ought to be done in the Summer Time, and in the drieſt Weather, though it may not be improper to have the Place where your Fire is made, a little out of the Sun, that the ſuperior Force of one may not extinguiſh the other.

When you have got about ſix or eight Load of Clay cut into Spits, about as thick as a Brick, let it be pretty well dried by the Sun, and having made a Heap of Fern, Straw, Furze, ſmall Bavin-Faggots, Billets, Coal, or other Combuſtibles, laid one upon another in a proper Order, about as big as a little Bonfire, in a pyramid Form, bring the Spits of Clay, and lay them round the ſame, two or three Spits thick, leaving only Room to put in the Fire, and then light the Heap. The Clay by the innate Heat of the Wood, *&c.* within, will ſoon take Fire, and as it advances outwards, ſtill lay on more Spits of Clay, placing them in ſuch an Order, as that the Fire may be pent up within the Heap, and never ſuffer'd to go out, for if you do that, your Labour will be all loſt, and you muſt begin again.

After you have burnt up, your ſix or eight Loads of Clay, which is a little dry, the Heat which is within will be ſo great as that it will fire any Thing, and

and then you may lay on the Clay green as it is dug out of the Pit, being always watchful to keep a new Addition of it, laying on one after another; (but not too faſt neither, leaſt you ſmother the Fire, and put it out that Way) and then, like that of the ancient *Veſtals*, the Fire will never go out.

One of the greateſt Difficulties that attends this Work, ſeems to be the laying on the Spits of Clay, when the Heap begins to grow large; (for they have ſometimes Heaps, as I am inform'd, of ſix or ſeven hundred Load in a Heap, or more:) but this, I think, may be done by placing a large Tripos, Quadrupos, or any other Figure, that joins in a Pyramid with a Joint at top, and of ſuch a Length, that you may enlarge and ſpread out the Feet as the Heap ſwells, having alſo Stages of Boards laid upon Brackets, on which the Men may ſtand, who place the Spits of Clay: This being done, and the Fire kept continually in, and watch'd Night and Day, you will ſoon have as large a Heap as you pleaſe, for the Improvement of Land; for the larger the Heap grows, the eaſier it is to burn the Clay, the innate Heat there is in the Heap labouring with all its Might to extricate itſelf, (and like the Vulcano's of *Ætna* or *Veſuvius*) to find Vents or Paſſages whereby it may diſgorge itſelf.

In *Suſſex* they allow about ſeven Load to an Acre of Paſture Land; but whether it does beſt upon low Land, or that which is of a chalky, gravelly, or ſandy, or on that which is of a cloſer Contexture, I am not as yet well inform'd; but that ſhall be the Subject of the next Summer's Obſervations, and in particular of that compendious but uſeful Eſſay, with which I ſhall cloſe all my Endeavours this way.

" Since the writing of theſe laſt Paragraphs, I have " met with ſeveral Hints from Gentlemen of un- " doubted Fidelity and Experience in *Suſſex*, where " this Method of burning of Clay has been more

" us'd than any where. One of thoſe Gentlemen is
" a Baronet of a conſiderable Figure and Genius in
" that County, who was not only one of the firſt,
" but one (as he himſelf has told me) that has done
" more at it than any body in all that Country,
" that he had found it had done extreamly well on
" his Corn-Land, being much preferable to Lime;
" but that he could not ſay ſuch great things of it,
" as to its Effects on Meadow-Land, but that he
" had try'd another Experiment of that kind in
" Meadow-Land, which was full of Ant or Mole-
" Hills, which he had plow'd with a Mole-Hill
" Plow, and had burnt the Hills to Aſhes, which
" Aſhes he had ſpread all over his Ground, and had
" had Crops of Graſs of 5 or 6 Ton on an Acre, or
" more, to the Amazement of every body that ſaw
" it, and that 3, 4, or 5 Years ſucceſſively.

" And this would be a good Intimation to all thoſe
" Gentlemen whoſe Eſtates have been neglected,
" one of which I myſelf have this Year ſeen in *Dor-*
" *ſetſhire*, where there is Land worth 20 *s.* or 30 *s.*
" an Acre, now let for not above 2 *s.* 6 *d.* or 3 *s.*

" This Intimation has alſo ſet another Friend of
" mine in *Wilts* to work; for having ſome Ground
" lying near a Coppice, which was on a ſtrong
" Land, and the outſide thereof full of Hills, all
" which my Friend (by my Advice) has plow'd up
" and burnt, not without a modeſt Aſſurance of
" making great Improvements on his Wheat-Land
" which lies juſt by.

" Since the Publication of the firſt Edition of
" this Pamphlet, (at leaſt the Appendix thereto)
" I have been told, that the Method that Noble
" Lord, who is ſaid to be the firſt Inventer of burn-
" ing of Clay, uſes, is not in a Pyramid or Heap,
" but in a Ridge, juſt as Tanners Bark is pil'd up
" in a Coppice when it is for ſale, keeping (as I
" ſuppoſe) a hollow Funnel, or Tunnel, in the
" middle

" middle to draw the Air. But for the real Me-
" thod take the following Account, which was
" ſaid to be taken from his Lordſhip's own Hand-
" Writing, in a Letter ſent to a Peer of *North-*
" *Britain.*

The Method of *Burning Clay*, by a Noble Lord.

" *ANY ſort of Clay will do, but the ſtronger it is*
" *the better, and the ſtronger the Ground is the*
" *more proper for this Manure, and it is more proper*
" *for Clay than Sand, becauſe it is a very hot thing. A*
" *Load of Turf burns Five hundred or a Thouſand*
" *Clods of Clay in one Heap. The Turf is but com-*
" *mon Dirt, dry'd and ſet on fire with Straw or Sha-*
" *vings. The drieſt Time in Summer is the propereſt*
" *to burn it in; whenever your Turf is ready you lay*
" *on a Heap of Clay to cover it quite up, and it will*
" *immediately turn to Aſhes; and when the Fire is like*
" *to break out you may lay on more Clay, and ſo on till*
" *you have either what you want, or the Fire happen to*
" *go out, and then you muſt make a freſh Heap, and*
" *you muſt bring the Turf to the place you dig the Clay,*
" *becauſe the Violence of the Fire will ſoon ſet. You*
" *lay the Aſhes upon the Graſs-Ground, either Mea-*
" *dow or Paſture, about* 10 *or* 20 *Loads to an Acre;*
" *the beſt Time is when the Hay is juſt led off. You*
" *take about* 20 *Loads to an Acre of plow'd Ground,*
" *and after it is laid on prepare it for any kind of Grain*
" *you think moſt proper, or for Potatoes, Turneps, or*
" *any other kind of Roots. It is likewiſe very pro-*
" *per for cold, barren, Channel Ground,* &c.

This, I ſay, is a true Copy of that Noble Lord's Letter, who was ſaid to be the firſt Inventer of this uſeful Improvement, communicated as it was to a Peer of *North-Britain*; but whether his Lordſhip's Inſtructions were too conciſe, or ſuch as the Perſons,

ſons, to whoſe Conduct this Affair was committed, did not underſtand, they found the Directions (as they ſay) were deficient, and would not do, for that when the Fire was lighted and had burnt ſome time, and the Turf and Straw conſum'd to Aſhes in the inſide, the Heap would tumble down and put the Fire out, at leaſt ſmother it ſo that it would not burn; and this put them upon trying another Experiment which anſwer'd their Expectation.

They erected a little Kiln of about 5 Foot Diameter at Bottom, and about 6 or 7 high, drawing it towards a Pyramid which remain'd about 2 Foot wide, the Figure whereof might be, from thence, well call'd the Fruſtum of a Cone, or Pyramid; this Pyramid was ſet either in ordinary coarſe Mortar, (or with Bricks with no Mortar at all in the Joints) but if in coarſe Mortar, there muſt be Holes for the Fire to break thro' and ſet the Materials, (which are to be pil'd up round it) on Fire.

To render this ſmall Kiln, or Pyramid, the more effectual, they made ſeveral Tunnels upon the Ground, about a Foot or a Foot and half ſquare, which correſponded with the bottom of the broken Pyramid, and were us'd as ſo many Holes to draw in the Air, and keep the Materials, which were pil'd up round the Pyramid, always lighted; or if by any chance (as extream Wet, or the like) that the Fire ſhould go out, it might be renew'd again, by putting Straw, Moſs, and other Combuſtibles, down the hollow of the broken Pyramid, and thruſting the ſame up thro' the Tunnels, and by re-lighting the Fire towards the Wind, might ſet the Heap on Fire again.

I have already ſet down, that in the new Improvement of this broken Pyramid or Kiln, the Tunnels were made to run ſquare on the ſides of the broken Pyramid: But I have thought of another Invention which, I think, much exceeds the former, and that

is,

is, the running the Tunnels Radius ways, (*Vid. the Plate following, Fig.* 1.) by which means, if the Fire ſhould go out it might the more eaſily be lighted, by putting in the Fire exactly at that Quarter where the Wind ſits.

The Figure (to which there is alſo a Scale put) is upon the firſt Inſpection demonſtrative of its Uſes; I only add, that at Top there ſhould be put 3 or 4 very large Tyles, or Slabs of flat Stone, looſe, croſs ways, to depreſs or keep down the Heat, and leave room for the Smoke to evaporate; theſe large Tyles, or Slabs of flat Stone, ſhould, I ſay, be looſe, that you may take them off, upon any occaſion when you renew your Fire, by putting in Straw, Moſs, Stubble, *&c.* and then laid on again.

The Structure of your Kiln being made, and the Uſes of it well underſtood, come we now to the piling up and Diſpoſal of the Clay which you are to burn, which, as has been elſewhere hinted, ſhould have been laid a drying ſome time before; and having fill'd the hollow broken Pyramid with Straw, Moſs, Stubble, ſmall Faggot-Wood, and the like, and having alſo ſtufft all the Tunnels leading to the Bottom of that Pyramid full alſo, with Combuſtibles of the like Nature, but not too hard, you are then to begin piling up your Clay and other Materials, which are to be burnt in the following Manner: Let the firſt Layer next the broken Pyramid be Straw, Stubble, Fern, and Furze, either ſeparate or mixt together, ſet round, if you pleaſe, with ſmall Bavinny-Wood, made of Brambles, Black or White-Thorn, or whatever ſmall looſe Stuff you can get, and on that begin your firſt Laying of Turfs dug up in thin Spits, like Brick, and prepar'd as before ſet down; then lay another Row of the ſame Combuſtibles as were beforemention'd, and another Layer of Turfs thicker than the former, and then the Fire may be put to, and new

Layers

Layers all of Clay put on as the Fire advances; the chief Difficulty is the coming at the Heap to lay on the Materials as the Heap increaſes, which I ſay is remedy'd by a Tripos, the Legs whereof ſhould be about 10 Foot long, and faſtened at Top by a Pin, which Tripos may be expanded as the Heap grows wider at Bottom.

I had almoſt forgot to ſet down, that as the Pyramid and Tunnels are either made of Brick or Stone, without any Mortar at all, or at leaſt that there ſhould be a great many Openings or Joints left, thro' which the Aſhes may fall, that would otherwiſe increaſe ſo much as to ſuffocate and ſmother the Fire; that the Perſon or Perſons who attend it, call'd Stokers, be provided with Rakes or Scrapers, ſuch as Bakers or Brewers uſe when they draw their Aſhes out, and clean their Ovens and under their Furnaces, with which Rake or Scraper the Aſhes may be pull'd out and the Tunnels kept open, ſo that the Air may have its free Force, and keep the Fire always alive; and by this means the Heap alſo will not grow ſo very wide, as to be troubleſome to thoſe that pile on new Layers of Clay.

I ſhould alſo have noted, that between every Layer of Clay there may be ſome few of the Materials, I have before recounted, put on. Every body that is acquainted with Huſbandry knows the Advantage there is in all Aſhes that come from Malt and other Kilns on Meadow and Corn-Land, when ſpread on by itſelf, but when mixt with theſe Clay-Aſhes, what is there that an induſtrious Farmer may not expect.

Before you begin burning, you are to go, not only into the Field, and collect all the Stubble you can, but you are to go into the Common, and collect what Fern, Furze, or other Combuſtibles are to be met with; and alſo into the Woods, where you

you may ſcrape up large Quantities of long Graſs, Moſs, and the like, all which will not only ſet and keep the Clay on Fire, but will alſo be of itſelf an excellent profitable Manure when mixt with theſe; the laſt of which, I mean Moſs, is, when burnt (tho' at preſent the leaſt known) one of the beſt Improvements on Graſs and Corn-Lands that is now us'd in Huſbandry.

To conclude; I know it is in this burning of Clay, as in all new Undertakings and Improvements of this kind, what with the Novelty of the Subject, the ſeeming Difficulty there is in the Execution, and the not underſtanding or knowing the Succeſs of it, join'd to a natural Lazineſs and Diſtruſt of every thing of this kind, which neither our Vathers or Vorevathers ever did before, that this new and very uſeful Improvement may meet with little regard in its firſt ſetting out. Tho' the Succeſs that it has met with, in Countries and Places where it has been ſome Time us'd, will, 'tis hop'd, prevail and get the better of all theſe Prejudices, and make it one of the moſt uſeful, as it is indeed the cheapeſt, of all Improvements. An ordinary Load of Lime, of four Quarters or Thirty two Buſhels, we know will coſt at leaſt Twelve or Thirteen Shillings; but as the Expence of this conſiſts only in Attendance, and by ſetting Fire to it is itſelf its own Executioner; and I can't ſee how a Load of this can coſt above One, but if it ſhould be Two or Three Shillings, it muſt certainly pay very well; ſince it is, by all Gentlemen which have try'd it, allow'd to be much better than Lime, and to go farther. Add to all, the uſeful Amuſement and Diverſion that there is in all Employs of this kind, which is all I ſhall add on this Head.

FINIS.

An Explanation of the References to the Plan and View of the new-invented Kiln for *burning of Clay.*

A *The Hollow of the broken Pyramid, or Kiln.*

BBBBBBBB *Eight Tunnels leading into it.*

CCCCCCCC *The Diviſions where the Clay and other Materials are plac'd.*

DDD *The Tunnels where the Fire is lighted.*

E *The Upright of the Fruſtum or broken Pyramid.*

FFFFFFFF *The Tunnels through which the Air draws to keep the Fire lighted.*

N. B. *There may be two or three Tunnels next the Wind lighted at one Time.*

BRITISH 16 AP 85 MUSEUM

BRITISH MUSEUM
16 AP 85

Fronting the end

Fig: 2

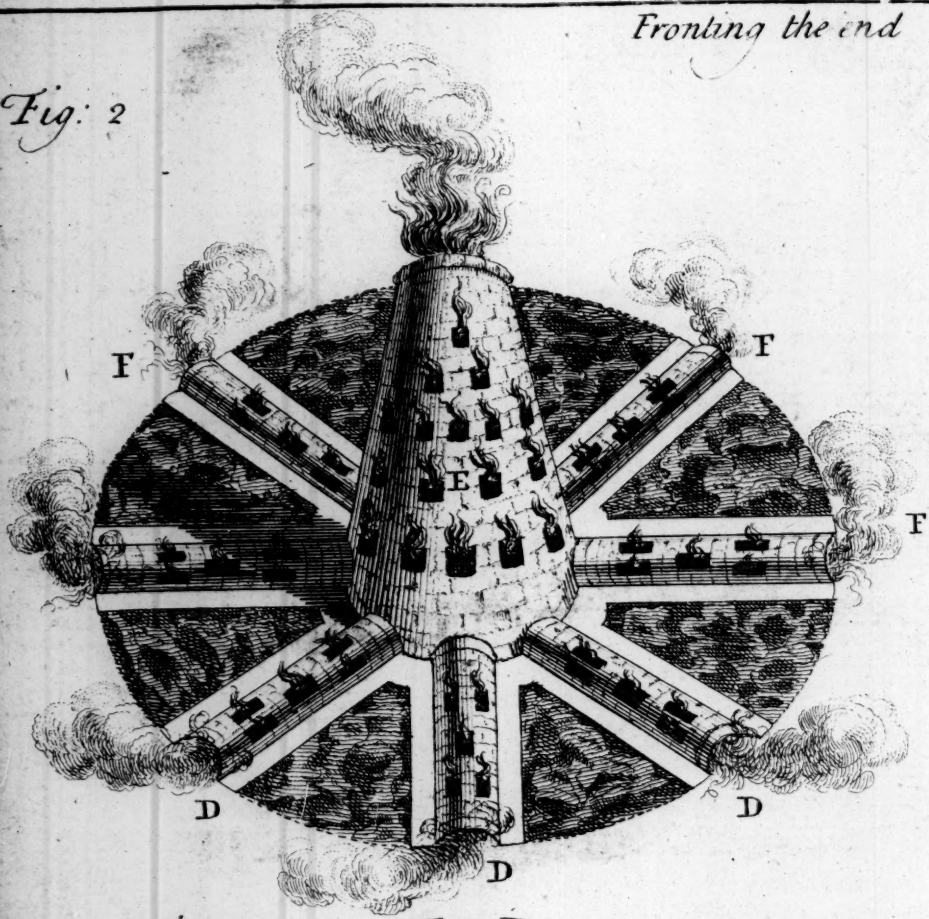
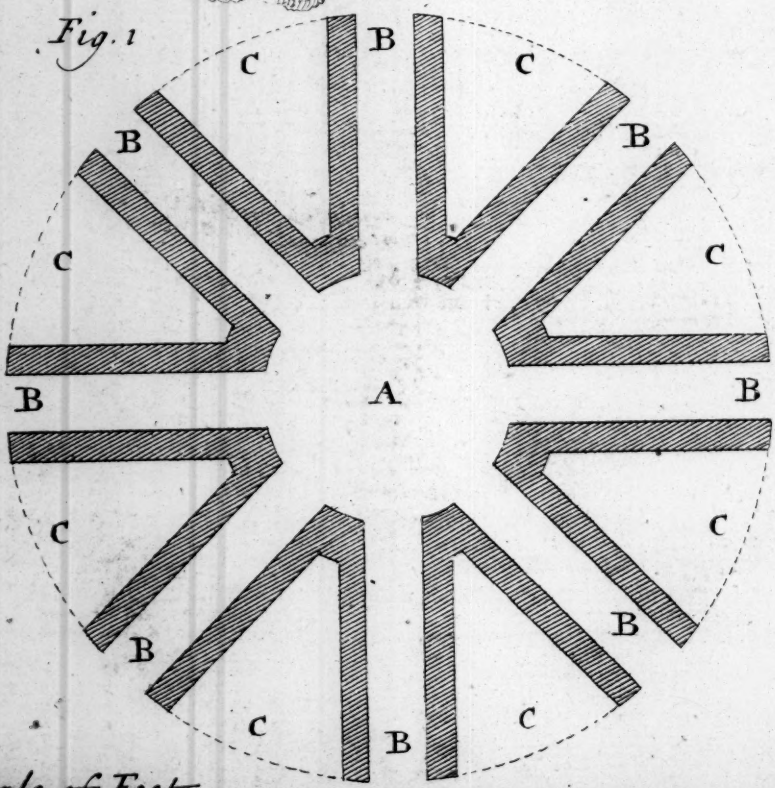


Fig. 1



A Scale of Feet

1 2 3 4 5 10 15 20